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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,961	12/13/2001	Susan Marie Cox	ROC920010225US1	1968
7590	04/21/2005		EXAMINER	
Valerie G. Dugan Dugan & Dugan, L.L.P. 18 John Street Tarrytown, NY 10591			PAYNE, DAVID C	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <b>UK</b> 10/021,961	Applicant(s) COX ET AL.	
	Examiner David C. Payne	Art Unit 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim(s) 1-6, 12-15, 17-21, 23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by

Delvaux US 6,775,305 B1 (Delvaux).

Re claim(s) 1, 12, 17, 23

Delvaux disclosed

A multi-channel communication link system that adds a sequence number to each proposed data packet targeted for transport across the communication link. Transport protocol data unit comprising a data packet and a corresponding sequence number that defines (marks) the relative position of the individual data packet in a source data packet stream as it traverses an interface between an ATM layer device and a physical layer device with a set of predetermined transport links (col./lines: 7/54-65). The streams of data packets are disassembled and reassembled based on the sequence numbers. The multi-channel link includes a plurality of communication line transmitters (143 of Figure 8) a plurality of communication lines (146 of Figure 8), a plurality of communication line receivers (145 of Figure 8). The invention also includes the ability for bandwidth on demand flexibility by adding additional communication lines to the physical transport link (col./lines: 18/10-25).

Re claims 2-6, 13-15, 18-21, 24-26

Delvaux disclosed using sequence number or markers in the individual streams to identify the data

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units for reassembly (col./lines: 7/54-65).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim(s) 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux US 6,775,305 B1 (Delvaux) in view of Widmer US 5,648,776 (Widmer).

Re claims 7 and 8, Delvaux disclosed the aforementioned invention but does not disclose where comma-sync characters are used.

Widmer disclosed the use of comma-sync characters in a serial bit detection system, see col./lines: 6/55-65. It would have been obvious to use the comma-sync characters in the Delvaux system for synchronization as this is a IEEE standard and used because it is not a widely used character.

5. Claim(s) 10, 11, 16, 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux US 6,775,305 B1 (Delvaux) in view of Morikura et al. US 5,539,846 (Morikura).

Re claim(s) 10, 16, 22, 27

Delvaux disclosed

the multi-channel communication link system as previously shown but does not disclose using optical fibers. Morikura disclosed using optical fibers for transmitting signals that have undergone a parallel-serial conversion (see Figure 1). It would have been obvious to one of ordinary skill in the art at the time of invention to use optical fibers as the transmission medium of the Delvaux invention since optical fibers are superior to other transmission media in flexibility, lightness in weight, and signal

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transmission stability to temperature as discussed in Morikura, see col./lines: 2/5-15.

Re claim(s) 11

Delvaux disclosed

the multi-channel communication link system as previously shown but does not disclose using 8b/10b encoding. Morikura disclosed using 8b/10b encoding, see col./lines: 2/55-60. It would have been obvious to one of ordinary skill in the art at the time of invention to use 8b/10b encoding in the Delvaux invention since adding 2 bits as this code does helps increase synchronization, as discussed in Morikura, see col./lines: 1/25-30.

6. Claim(s) 9 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux US 6,775,305 B1 (Delvaux) in view of Hutchison et al. US 5,408,473 (Hutchison).

Re claim(s) 9 and 28

Delvaux disclosed

the multi-channel communication link system as previously shown but does not disclose dividing the stream along half-words. Hutchison disclosed a transmitted serial stream that is demultiplexed onto two channels by sending sequential blocks of equal number of bits over alternate channels (see Figure 2, col./lines: 2/48-52). These 4 bit transmissions represent half the word unit of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention to divide the transmissions in this manner given that a minimum implementation of either invention would require at least two parallel transmissions and therefore evenly divide the transmission data units over the physical links.

7. Claim(s) 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delvaux US 6,775,305 B1 (Delvaux) in view of Hutchison et al. US 5,408,473 (Hutchison) and Morikura et al. US 5,539,846 (Morikura).

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Re claim(s) 29

Delvaux disclosed

the multi-channel communication link system as previously shown but does not disclose dividing the stream along half-words and optical fibers. Hutchison disclosed a transmitted serial stream that is demultiplexed onto two channels by sending sequential blocks of equal number of bits over alternate channels (see Figure 2, col./lines: 2/48-52). These 4 bit transmissions represent half the word unit of the invention. It would have been obvious to one of ordinary skill in the art at the time of invention to divide the transmissions in this manner given that a minimum implementation of either invention would require at least two parallel transmissions and therefore evenly divide the transmission data units over the physical links.

Morikura disclosed using optical fibers for transmitting signals that have undergone a parallel-serial conversion (see Figure 1). It would have been obvious to one of ordinary skill in the art at the time of invention to use optical fibers as the transmission medium of the Delvaux invention since optical fibers are superior to other transmission media in flexibility, lightness in weight, and signal transmission stability to temperature as discussed in Morikura, see col./lines: 2/5-15.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp



David C. Payne  
Patent Examiner  
AU 2633